

DESCRIPTIONS OF THREE NEW SPECIES OF SUCKING LICE,
TOGETHER WITH A KEY TO SOME RELATED SPECIES
OF THE GENUS *POLYPLAX*.

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In this paper three new species of sucking lice, or Anoplura, are described, and a key to four of the species of the *spinulosa* group of the genus *Polyplax* is given. One of the new species comes from an American mouse, one from an American deer and one from the gorilla.

HAEMATOPINIDAE.

Polyplax alaskensis, new species.

Male.—Head almost as broad as long and not produced into a median process posteriorly. First segment of antenna much broader than any of the others and as broad as long; second segment longer than broad and about half as broad as the first; third segment with anterior appendage well developed and bearing a very short, stout spine at tip; fourth segment broader than long; fifth segment slightly longer than broad and not so broad as fourth segment. At the angle of each temporal lobe is situated a very large seta and in front of it two smaller ones, the most anterior being the shortest.

Thorax as broad as long. Spiracles directly over the second coxae and in diameter equal to about one-fourth the width of the latter. Sternum about as broad as long, at its broadest place overlapping the second coxae, and with the posterior, median process extending to between the inner processes of the third coxae.

Abdomen rather slender. Setae on tergites and sternites not flattened, almost straight. First pleurite unchitinized in the middle, its ventral seta larger than its dorsal and almost as long as the pleurite itself; second pleurite chitinized at the middle, barely enclosing the spiracle at its ventral border, and bearing one discal and two marginal setae, the ventral marginal being the longest and stoutest and equaling the pleurite itself in length; third pleurite similar to the second except that the discal seta is the longest and the ventral marginal one the shortest, this latter seta being not over a third the length of the pleurite; fourth pleurite and its setae similar to the third; fifth similar to the fourth but the position of the discal seta is more ventral, and the ventral marginal seta is somewhat longer; sixth pleurite much more slender than the fifth, with the spiracle ventrally placed and the marginal setae subequal, very long and somewhat flagelliform, also the discal seta is situated more ventral than the ventral, posterior seta; seventh and last pleurite similar to but shorter than the sixth and without discal seta.

Genital armature of the *spinulosa* type; basal plate with incurved and thickened lateral margins which are continued backward into enlarged, truncate, articulating processes bearing the parameres; parameres much reduced, angulate laterally, articulating with processes of basal plate along a surface that is at an angle of about 45° to median plane, extending forward scarcely beyond the articulations with processes of basal plate; pseudopenis a very large, up-

turned hook with basal process, and about twice the length of parameres; no well-developed penis present.

Legs as in the *spinulosa* group of species.

Length, 1.02 mm.; width, 0.31 mm.

Type host and type locality.—*Microtus* sp., from Alaska.

Type.—Cat. No. 40159, U. S. N. M.

Described from a single male in excellent condition, taken from *Microtus* sp. in Alaska, May 17, 1924, by A. H. Twitchell. This species differs from *spinulosa* (Burmeister), *serrata* (Burmeister) and *reclinata* (Nitzsch) in the shape of the sixth pleural plates which are narrower and differently shaped from the typical ones and in having the unpaired discal seta on the typical pleural plates situated differently. *P. spinulosa* and *P. reclinata* have three setae on the typical pleural plates, but the unpaired seta is much smaller and usually situated at or on the posterior margin. The relationships of this new species to three of the species of the *spinulosa* group are further indicated in a key that follows.

Key to Four Related Species of the spinulosa Group of the genus Polyplax.

1. Setae on typical pleural plates longer than the plates themselves; spiracles large.....*P. reclinata* (Nitzsch).
 Setae on typical pleural plates much shorter than the plates themselves; spiracles smaller..... 2.
2. Parameres of male genital armature large, distinctly crescentic and longer than the pseudopenis.....*P. spinulosa* (Burmeister).
 Parameres of male genital armature much smaller, not crescentic and much shorter than the pseudopenis.....3.
3. Sternal plate as broad as long; articulating processes of basal plate (of male genital armature) enlarged and truncate distally; parameres angulate on outside margin. Larger, stouter species.....*P. alaskensis*, new species.
 Sternal plate longer than broad; articulating processes of basal plate attenuated distally; parameres not angulate on outside margin. Smaller and more slender species.....*P. serrata* (Burmeister).

***Linognathus panamensis*, new species.**

Female.—Head small. Forehead short, slightly swollen, dome- or crown-shaped; broader than long. Antennae long, equal to the head in length; first segment the broadest, as broad as long; second segment slightly longer than the first; third slightly shorter and slightly narrower than the second; fourth broader than the third and broader than long, its sense area covering about the distal third of posterior margin; fifth segment slightly shorter and narrower than the fourth, its sense area covering about the basal one-half of posterior margin.

Thorax broad, with sides diverging posteriorly. Thoracic spiracles large, the anterior margins of spiracular bulbs lying directly over the anterior margins of second coxae; openings of spiracles about one-half the diameter of bulbs. Inside and posterior to the spiracles is situated a pair of setae, each being about

as long as a third of the width of the thorax; between this pair and the spiracles is situated a minute pair of setae.

Abdomen large and long, the segments bearing typically above and below two very irregular, transverse rows of setae. Pleural setae as follows: A single, very long pair on segment II, a pair of minute setae on segment III and segment IV; a single pair of very long setae on segment V; two pairs of very long, flagelliform setae on segment VI and on segment VII. The last abdominal segment is deeply incised, the notch being squarish and leaving a pair of projecting lobes. Each of these lobes bears two terminal setae, the outer being the stoutest, and four large marginal setae, some of which are longer than the segment itself. Gonopods slender, convergent and each bearing at its tip three large subequal setae that extend beyond the free margin of the last segment.

Legs stout; the last pair very slightly larger than the middle pair. First tarsal claws very long, slender and curved; third tarsal claws slightly longer than second.

Length, 1.74 mm.; width, 0.71 mm.

Type host and type locality.—*Odocoileus chiriquensis*, from Panama.

Types.—Cat. No. 40160, U. S. N. M.

Described from a few females which are part of a lot of six specimens obtained from a deer, *Odocoileus chiriquensis* (U. S. N. M. No. 240843) originally obtained in Panama, but which died at the National Zoological Park, January 28, 1925. This species differs from *Linognathus crassicornis* Nitzsch, reported from *Odocoileus columbianus*, in a number of characters. Nitzsch's *crassicornis* has but a single transverse row of setae for each abdominal segment, and should be placed in Mjöberg's genus *Cervophthirus* if this genus is to be recognized, while *panamensis* has two transverse rows. Also each of the gonopods of *crassicornis* terminates in a stout spine, while in *panamensis* each terminates in three long setae.

PEDICULIDAE.

Phthirus gorillae, new species.

First nymph.—Head rather small; forehead broader than long. Antennae not equal to the head in length; first segment the shortest, broader than long; second segment longer than first but broader than long; third segment as broad as second and about twice as long.

Thorax much broader than long. Thoracic spiracles in usual place, but no larger than the abdominal spiracles; tracheal trunk from spiracles running backward.

Abdomen as broad as long and slightly two-lobed behind. Abdominal spiracles situated on tubercles; first pair greatly displaced medially, being situated about half way between the lateral margin of the abdominal segment and the median line; second spiracles displaced about one-half as much as the first and situated between the first and third spiracles; third, fourth, fifth and sixth spiracles lateral in position. Abdomen sparsely studded with medium setae, there being a short transverse row of three on each side, ventrally on

the last abdominal segment, in the position of the gonopods of the adult louse. The two outer of these are much longer than the inner one.

Legs stout. First pair as long as but much more slender than the others; its tarsal claw long, slender, sharp and much curved, equal in length to the tarsal segment that bears it; tibial thumb small but bearing a straight, sharp spine about one-half as long as the tarsal segment, and two longer setae. Second pair of legs enlarged, equal to the third; tibia broader than femur and with well-developed tibial thumb bearing at its tip a spine and a much longer seta; tarsus longer than tibia and bearing on its inner surface four tooth-like, gripping tubercles; tarsal claw flattened, more or less scoop-like and provided on its inner surface with two large and one small gripping tubercles. Third legs almost complete duplicates of the second, probably a little larger.

Length, 0.60 mm.; width, 0.33 mm.

Type host and type locality.—*Gorilla beringeri*, from eastern Belgian Congo.

Type.—Cat No. 40161, U. S. N. M.

This species differs in the first nymphal stage from *P. pubis*, the only other species in the genus *Phthirus*, in a number of characters. The third segment of the antenna is much stouter than in *pubis*; the legs are shorter; the tarsal claws of the second and third legs are much shorter than the tarsi, have three gripping tubercles and only slight indications of terminal swellings; while these claws in *pubis* are about equal to the tarsi in length, have five gripping tubercles, in addition to terminal enlargements. Only first nymphs and eggs obtained from two skins of *Gorilla beringeri* (U. S. N. M. 239883 and 239884) obtained by Benjamin Burbridge during his expedition for taking moving pictures of the gorilla in eastern Belgian Congo. I collected the material before the skins were tanned but was unable to obtain adult specimens although scores of nits were present on both skins. The nits were placed over many parts of the body, showing that this species is a true body louse and not restricted chiefly to the pubic region like *P. pubis*. The significance of this species taxonomically and from the standpoint of phylogeny of both the higher lice and their hosts will be left for consideration in another paper in which it is planned that photographs of the first nymphal instars of both *pubis* and *gorillae* will be given.

A BLIND BEETLE EXCAVATED FROM AN EGYPTIAN CITY'S RUINS DATING BETWEEN 117 AND 235 A. D.

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Fragments of a curious, minute, blind and wingless beetle were referred to the writer from the National Museum in the belief that they might represent a highly specialized subterranean form of Tenebrionid, and the result of its examination